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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/183,694	10/30/1998	JACKSON L. ELLIS	98-179	3415

24319   7590   02/08/2002

LSI Logic Corporation
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EXAMINER
PARK, ILWOO

ART UNIT	PAPER NUMBER
2185	

DATE MAILED: 02/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>13 December 2001</u> .

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>3 and 16-20</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>3 and 16-20</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

   If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

   a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1.   The request filed on 12/13/01 for a Continued Prosecution Application (CPA) under 37

CFR 1.53(d) based on parent Application No. 09/183,694 is acceptable and a CPA has been

established. An action on the CPA follows

2.   Claims 1, 2, and 11-15 are canceled and claim 3 is amended. The following rejections

now apply.

3.   Claims 3 and 16-20 are presented for examination.

4.   Garrett et al., Bean et al., Krakirian, Olson et al., and Ellis et al. were cited as prior art in

the last office action.

5.   The text of those sections of Title 35, U.S. Code not included in this action can be found

in a prior Office action.

6.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al., US

patent No. 6,029,226 and Jones et al., US patent No. 5,483,641.

        As to claim 3, Ellis et al teach a data controller [col. 4, lines 38-58], that is couplable to a

host and coupled to a storage medium, microprocessor, local storage and a buffer memory,

comprising a command queuing engine that creates a plurality of threads of sequential commands

[col. 6, lines 17-33; col. 6, lines 63-66] while minimizing [col. 7, lines 1-3] interrupts associated to

the commands.

        However, Ellis et al do not explicitly disclose the plurality of threads of sequential

commands exist simultaneously.

Jones et al teach a data controller comprising a command queuing engine that creates a

plurality of threads of sequential commands that exist simultaneously [col. 50, lines 50-60; col. 53,

lines 1-63].

Therefore, it would have been obvious to one of ordinary skill in the art to combine the

teachings of Ellis et al and Jones et al because they both teach a command queuing engine that

creates a plurality of threads of sequential commands and the Jones et al's teaching of the plurality

of threads of sequential commands existing simultaneously would increase flexibility in handling

multiple SCSI CDBs of Ellis et al's various versions of SCSI [Ellis et al: col. 1, lines 36-45].

7.   Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ellis et al.,

US patent No. 6,029,226 and Jones et al., US patent No. 5,483,641 as applied to claim 3 above,

and further in view of Bean et al., US patent No. 4,543,626.

As to claims 16 and 18, Bean et al teach a command queuing engine comprises:

a transfer extend generator configured to generate (col. 4, lines 38-42) transfer extend

entries for a data transfer between the storage medium and a host computer; and

a data retrieval channel (col. 6, lines 64-68) coupled to receive the transfer extend entries

for programming the data transfer.

As to claim 19, Bean et al teach the command queuing engine further comprising a status

retrieval channel (col. 4, lines 18-21).

As to claim 20, Bean et al teach each of the retrieval channels are coupled to receive transfer extend entries and to provide (implicit: col. 7, lines 29-57) used read pointers to a first storage device of the peripheral device.

As to claim 17, Bean et al teach the transfer extend generator is coupled to the buffer memory to store the transfer extend entries (col. 4, lines 15-18).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Ellis et al, Jones et al, and Bean et al because they both teach receiving and processing host commands for a data transfer between the host and the local memory and the Bean et al's teaching of the command queuing engine generating transfer extend entries for host commands would increase efficiency of the Ellis et al and Jones et al's microprocessor.

8.   Any inquiry concerning this communication should be directed to Ilwoo Park, whose telephone number is (703) 308-7811 or via e-mail, *ilwoo.park@uspto.gov*. The Examiner can normally be reached Monday through Friday from 9:00 AM to 5:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Thomas C. Lee, can be reached at (703) 305-9717.

Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Any response to this action should be mailed to:

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or faxed to:

(703) 746-7239 (for formal communications intended for entry),

(703) 746-7238 (for after-final communications),

or:

(703) 746-7240 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,

Arlington. VA., Sixth Floor (Receptionist)

Ilwoo Park

January 24, 2002

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